W. A. Hurwitz: "Some properties of methods of evaluation of divergent sequences."

W. C. Graustein: "Parallel maps of surfaces."

J. H. M. Wedderburn: "On the maximum value of a determinant."

J. H. M. Wedderburn: "On the automorphic transformation of a bilinear form."

J. W. Lasley, Jr.: "Some special cases of the flecnode transformation of ruled surfaces."

R. G. D. Richardson: "The theory of relative maxima and minima of quadratic and hermitian forms and its application to a new foundation for the theory of bilinear forms. First paper: Equivalence of pairs of bilinear forms."

J. S. Taylor: "The analytic geometry of complex variables with some applications to function theory."

C. H. Forsyth: "The value of a bond to be redeemed ultimately, both principal and interest, in equal installments."

C. H. Forsyth: "Valuation of bonds bought to realize a specified rate of interest assuming the amortizations to accumulate at a savings bank rate."

Einar Hille: "Zeros of Legendre functions."

W. B. Carver: "Systems of linear inequalities."

J. L. Coolidge: "Differential geometry of the complex plane."

C. L. E. Moore: "Note on minimal varieties in hyperspace."

I. J. Schwatt: "Independent expressions for the Bernoulli numbers."

I. J. Schwatt: "Relations involving the numbers of Bernoulli and Euler."

I. J. Schwatt: "Independent expressions for Euler numbers."

I. J. Schwatt: "Independent expressions for the Euler numbers of higher order."

I. J. Schwatt: "Summation of a type of Fourier's series."

F. W. Owens: "On the projectivity assumption in projective geometry."

R. W. Burgess: "On certain simple skew frequency curves."

G. M. Robison: "Divergent double series and sequences."

G. D. Birkhoff: "An extension of Poincaré's geometric theorem."

J. L. Walsh: "On the location of the roots of polynomials."

Abstracts of the papers will appear in the March issue of the society's *Bulletin*.

The fifteenth western meeting of the society was held at Chicago on December 29–30, in connection with the meeting of the American Association for the Advancement of Science. The next regular meeting of the society will be held at New York on February 26.

R. G. D. RICHARDSON,
Secretary

THE AMERICAN ASTRONOMICAL SOCIETY

THE twenty-fifth meeting of the society was held in affiliation with the American Association for the Advancement of Science at the University of Chicago on December 28–30, 1920. In common with other societies there was a full attendance of members, about sixty astronomers being present, and there were many interesting and valuable papers. Sessions were held on three days in the Ryerson Physical Laboratory, but without doubt the most important astronomical communication was presented at the joint session with the American Physical Society and the Optical Society of America, when Professor A. A. Michelson announced the striking success of his interferometer as applied at Mt. Wilson in the direct measure of the diameter of the star α *Orionis*.

The members attended a joint dinner at the Quadrangle Club with the members of the mathematical societies, and there was the usual profitable intercourse with other men of science made possible at these large gatherings.

As this was not the annual meeting of the society, there were no particular matters of business to be considered. A dozen new members were elected, bringing the total membership to something more than three hundred and fifty.

Following are the titles of the papers, abstracts of which will be regularly published in *Popular Astronomy*.

Note on the comparison of spectral types determined at Harvard and Mount Wilson: W. S. ADAMS and A. H. JOY.

Evidence regarding the giant and dwarf division of stars afforded by recent Mount Wilson parallaxes: W. S. ADAMS and A. H. JOY.

Additional evidence on changes of wave-length which are progressive with stellar type: SEBASTIAN ALBRECHT.

Sun-spot intensities as components of a Fourier series: DINSMORE ALTER.

The association of hydrogen lines with the "invariable" K line in the spectrum of κ *Draconis:* R. H. BAKER.

Observations of the present disappearance of the rings of Saturn: E. E. Barnard.
Probable explanation of the apparent elongation of the Gegenschein: E. E. Barnard.
Comments on the spectra of Nova Cygni No. 3 and Nova Aquilae No. 3: S. B. Barrett and E. B. Frost.
The system of magnetic forces during the solar eclipse of May 29, 1919: Louis A. Bauer.
The light-curve of Nova Cygni No. 3: Leon Campbell.
Some new methods for double star orbits: G. C. Comstock.
An instrumental source of doubling of the emission lines in the spectrum of γ Cassiopeiae: R. H. Curtiss.
The search for the gravitational effect predicted by Einstein for solar wave-lengths: Ralph E. Delury.
Second note on the displacements of spectrum lines at the limb of the sun: Ralph E. Delury.
Further note on fluctuations in the moon's longitude in relation to meteorological variations: Ralph E. Delury.
Some measurements of the displacements of spectrum lines in the penumbrae of sun-spots: Ralph E. Delury and John L. O'Connor.
Notes on atmospheric conditions at Tucson, Arizona: A. E. Douglass.
Stellar parallaxes determined at the Dearborn Observatory: Philip Fox.
On some "irreconcilables" among stellar radial velocities: E. B. Frost.
Sundry spectroscopic binaries: E. B. Frost and S. B. Barrett.
Notes on Nova Cygni No. 3: W. E. Harper.
The spectroscopic orbit of Boss 5070: W. E. Harper.
The photographic light-curve of Nova Cygni No. 3: F. Henroteau.
The North America nebula: F. Henroteau.
Recent photographic observations of several well-known novae: C. O. Lampland.
Motions of the prominence of October 8, 1920: O. J. Lee.
Progress in the reduction of the Kapteyn zone at north declination 45°: O. J. Lee.
The Des Moines municipal observatory: D. W. Morehouse.
On the age of the stars: F. R. Moulton.
Orbit of the spectroscopic binary τ Cygni (period 3 h. 25 m.): J. Paraskevopoulos.
Objective prism spectra of Nova Aquilae No. 3 and Nova Cygni No. 3: J. A. Parkhurst and E. B. Frost.
The diameter of α Orionis by Michelson's interferometer methods: F. G. Pease.
The intensity distribution in tpyical stellar spectra: H. H. Plaskett.
The spectroscopic orbit and dimensions of Z. Vulpeculæ: J. S. Plaskett.
A wide-angle astronomical doublet: Frank E. Ross.
The Kostinsky effect: Frank E. Ross.
Comparative tests of the 100-inch and 60-inch reflectors: F. H. Seares.
Secular motion of perihelion due to the dragging of a compressible aether: L. Silberstein.
On some new variable stars: Joel Stebbins.
Spectrographic observation of rotating spiral nebulæ: V. M. Slipher.
Photographic distortion on eclipse plates and the Einstein effect: Frederick Slocum.
Chronographic measurement of small time intervals: R. Meldrum Stewart.
Recording of wireless time signals: R. Meldrum Stewart and J. P. Henderson.
Circle flexure of the Ottawa meridian circle: R. Meldrum Stewart and C. C. Smith.
Progress of the measurement of the Hussey double stars: G. Van Biesbroeck.
Note on the effect of the barometric gradient on meridian observations: C. C. Wylie.
On the probable reason why certain periodic comets have not been found on their predicted returns: Jessica M. Young.
The spectroscopic orbit of ο Draconis: R. K. Young.

Joel Stebbins,
Secretary

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